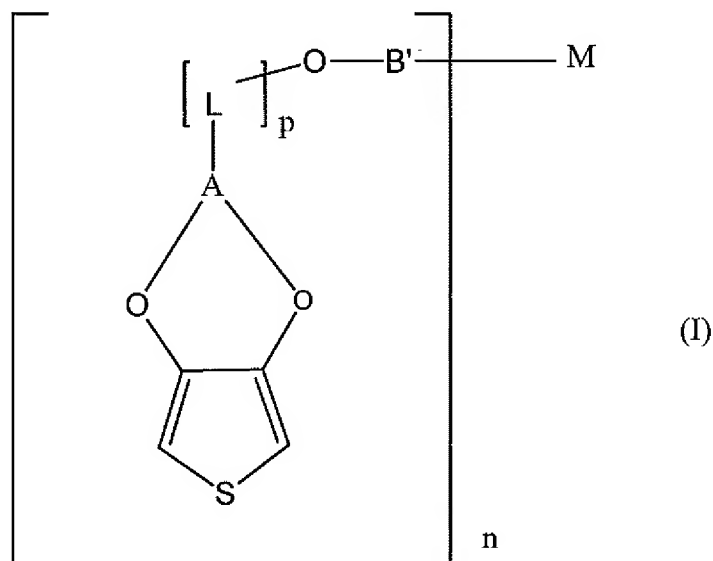


**AMENDMENTS TO THE CLAIMS**

Claims 1-45 (Canceled).

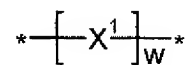
46. (Previously presented) A 3,4-Alkylendioxythiophenes of the formula (I),



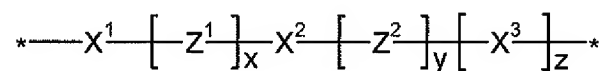
wherein

- A is a C<sub>1</sub> or C<sub>3</sub>-C<sub>5</sub>-alkylene radical which is substituted at any point by a linker L and optionally bears further substituents,  
 L is a methylene group,  
 p is 0 or an integer from 1 to 6,

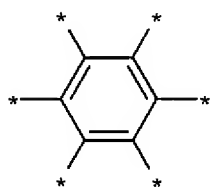
M is an n-functional group of the formula (II-a), (II-b) or (II-c-1) to (II-c-6),



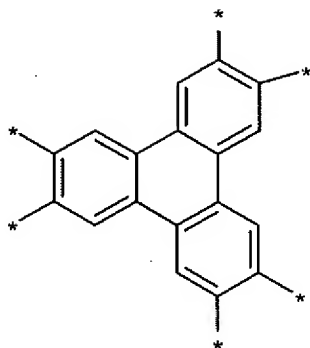
(II-a)



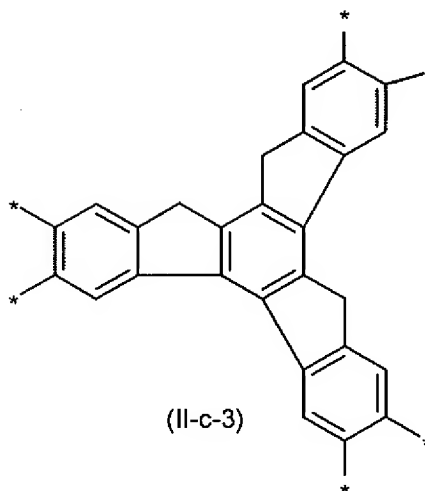
(II-b)



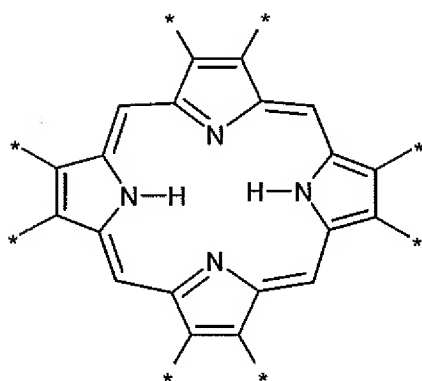
(II-c-1)



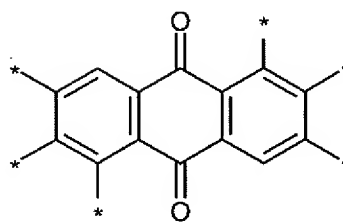
(II-c-2)



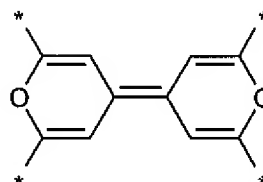
(II-c-3)



(II-c-4)



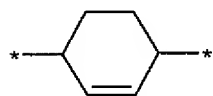
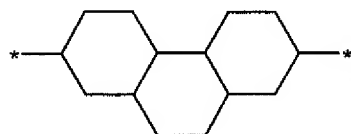
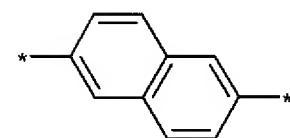
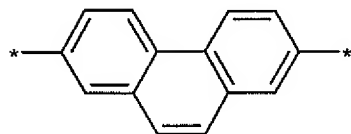
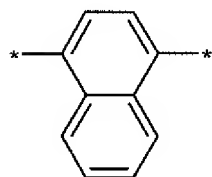
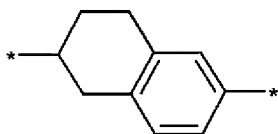
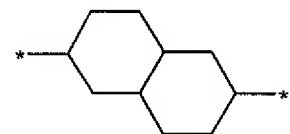
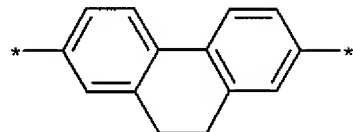
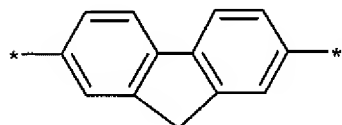
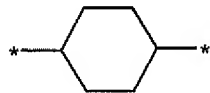
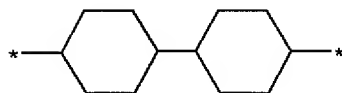
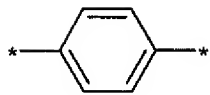
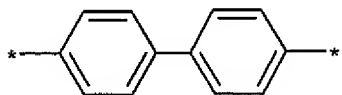
(II-c-5)

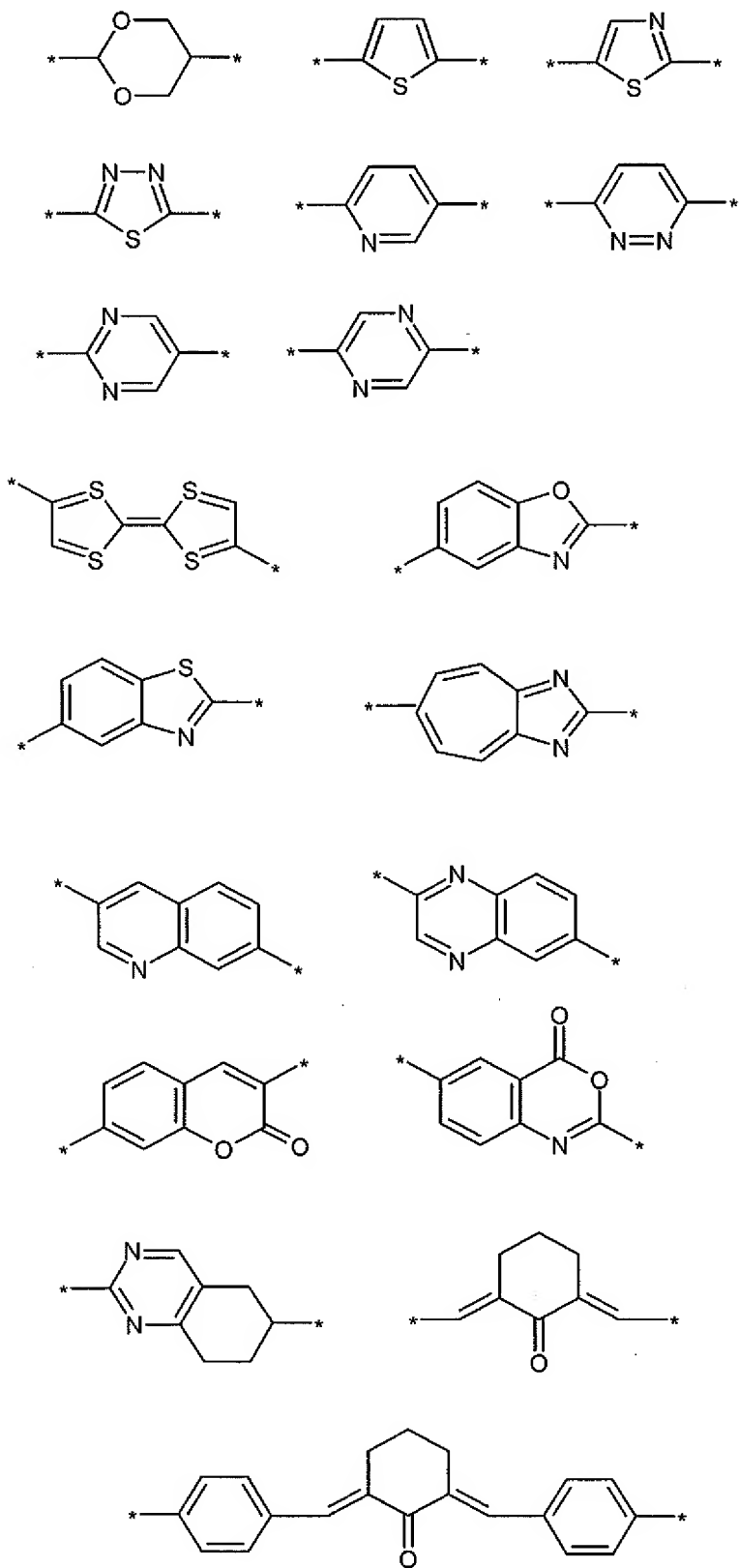


(II-c-6)

wherein

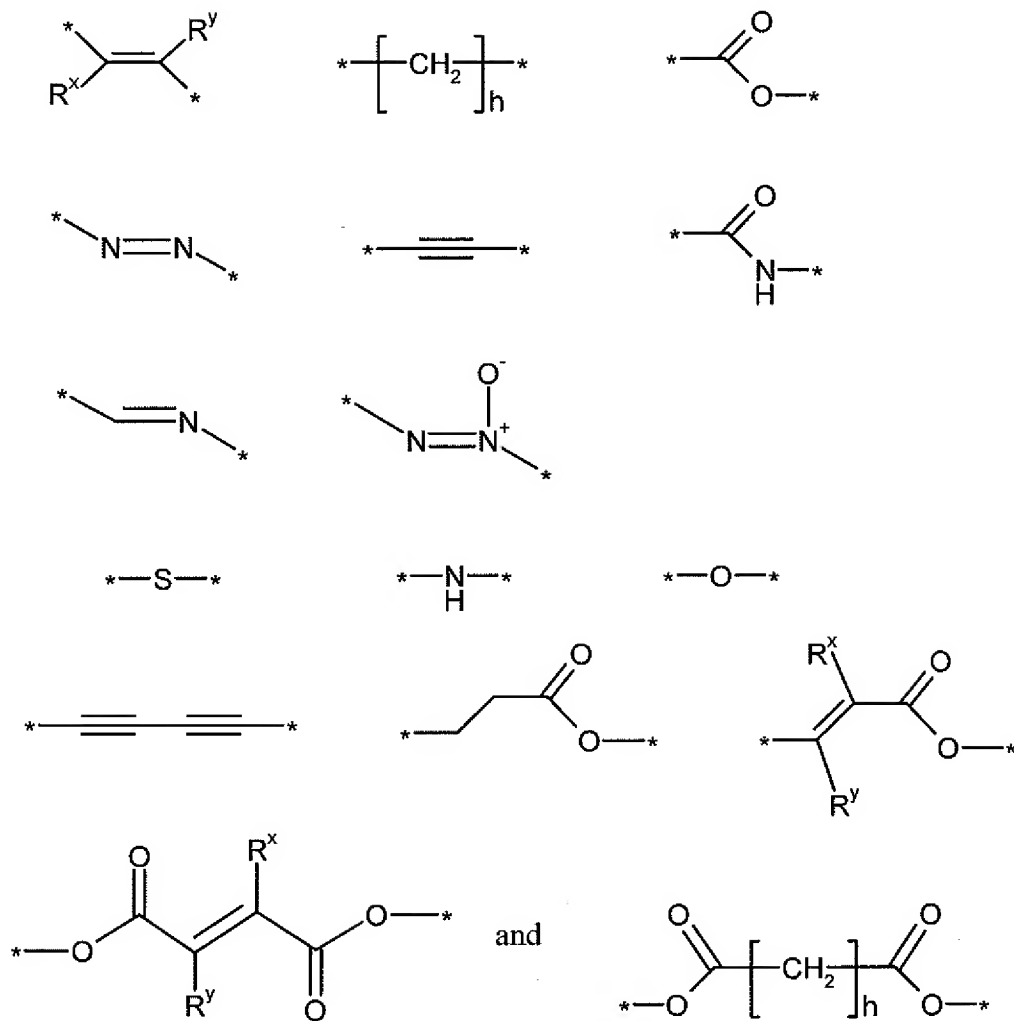
$X^1$ ,  $X^2$  and  $X^3$  are substituted or unsubstituted structures selected independently from the group consisting of





and

$Z^1$  and  $Z^2$  are structures selected independently from the group consisting of



wherein

$\text{R}^x$  and  $\text{R}^y$  are each, independently of one another, H, substituted or unsubstituted  $\text{C}_1\text{-C}_{22}$ -alkyl,  $\text{C}_1\text{-C}_{22}$ -haloalkyl,  $\text{C}_1\text{-C}_{22}$ -alkenyl,  $\text{C}_1\text{-C}_{22}$ -alkoxy,  $\text{C}_1\text{-C}_{22}$ -thioalkyl,  $\text{C}_1\text{-C}_{22}$ -iminoalkyl,  $\text{C}_1\text{-C}_{22}$ -alkoxycarbonyl,  $\text{C}_1\text{-C}_{22}$ -alkoxycarbonyloxy, a radical of an aliphatic  $\text{C}_1\text{-C}_{22}$ -alkanecarboxylic acid or of acrylic acid, halogen, pseudohalogen,  $\text{NO}_2$ , a carboxyl group or a hydroxy group,

$h$  is an integer from 1 to 10,

$w$  is an integer from 1 to 5,

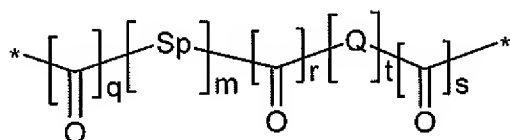
x, y and z are each, independently of one another, 0 or 1, and

n an integer from 1 to 8, where when n is 1, the group of the formula (II-a) or (II-b) bears a terminal group F' at the linkage points denoted by \*,

wherein

F' is substituted or unsubstituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>1</sub>-C<sub>22</sub>-haloalkyl, C<sub>1</sub>-C<sub>22</sub>-alkenyl, C<sub>1</sub>-C<sub>22</sub>-alkoxy, C<sub>1</sub>-C<sub>22</sub>-thioalkyl, C<sub>1</sub>-C<sub>22</sub>-iminoalkyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyloxy, a radical of an aliphatic C<sub>1</sub>-C<sub>22</sub>-alkanecarboxylic acid or of acrylic acid, halogen, pseudohalogen, a nitro (NO<sub>2</sub>) group, a carboxyl group, a sulphonic acid group or sulphonate group or a hydroxy group,

B' is a bridging group of the formula (B)



(B)

wherein

q is 0 or 1,

r and s are identical or different and each are 0 or 1, with the proviso that when r is 1, s is 0 and vice versa or both are optionally 0,

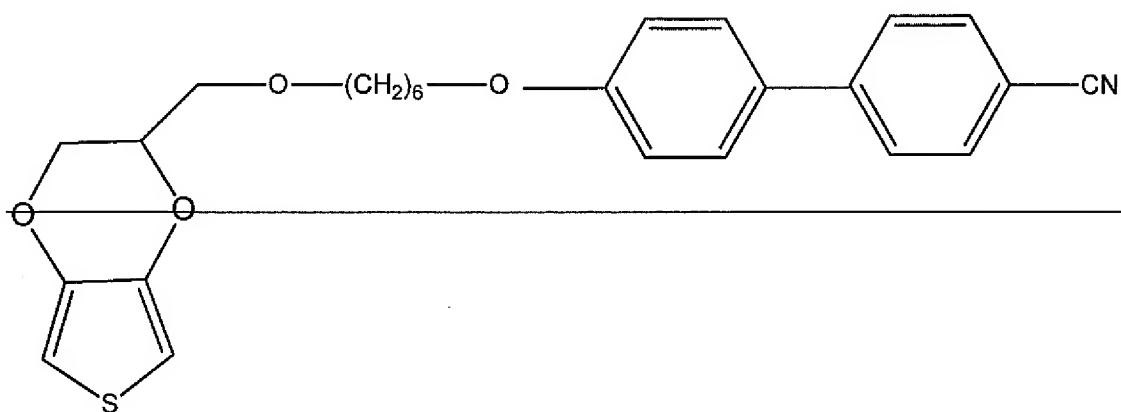
t is 0 or 1,

Sp is a spacer selected from the group consisting of substituted and unsubstituted linear or cyclic C<sub>1</sub>-C<sub>20</sub>-alkylene groups, C<sub>5</sub>-C<sub>20</sub>-arylene groups, C<sub>2</sub>-C<sub>20</sub>-heteroarylene groups in which from one to three heteroatoms selected from the group consisting of N, O and S can additionally be present in the heteroaromatic ring or ring system, C<sub>6</sub>-C<sub>20</sub>-aralkylene groups, C<sub>2</sub>-C<sub>200</sub>-oligoether and -polyether groups,

m is 0 or 1, and

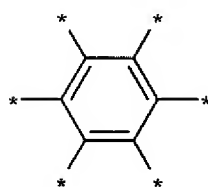
Q is O, S or NH

~~with the proviso that said polythiophenes is not~~

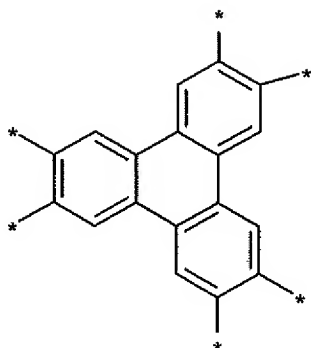


47. (Previously presented) The 3,4-Alkylenedioxythiophenes of claim 46,  
wherein

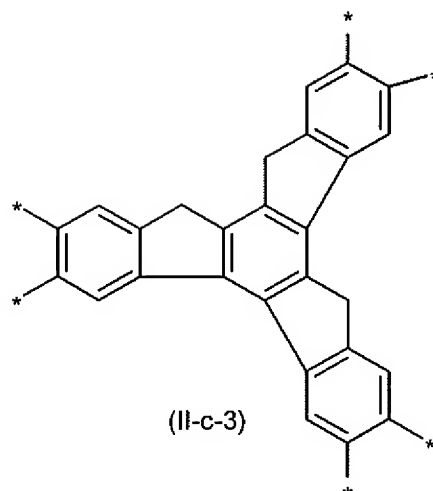
M is an n-functional group selected from the group consisting of the formulae (II-c-1) to (II-c-6),



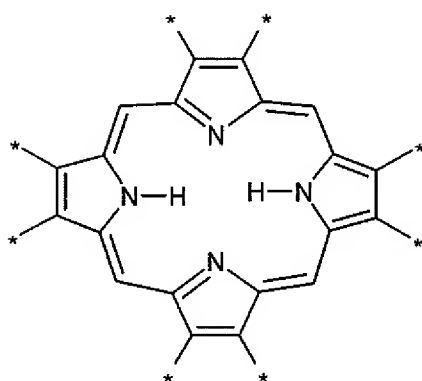
(II-c-1)



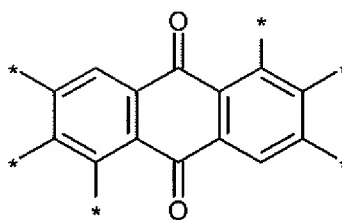
(II-c-2)



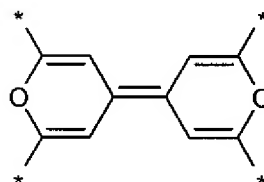
(II-c-3)



(II-c-4)



(II-c-5)



(II-c-6)

wherein

n is at most 4, 6 or 8,

and wherein when n is an integer below 4, 6 or 8, M is selected from the group consisting of the formulae (II-c-1) to (II-c-6) bearing a terminal group F' on the remaining 4 - n, 6 - n or 8 - n linkage points denoted by \*,

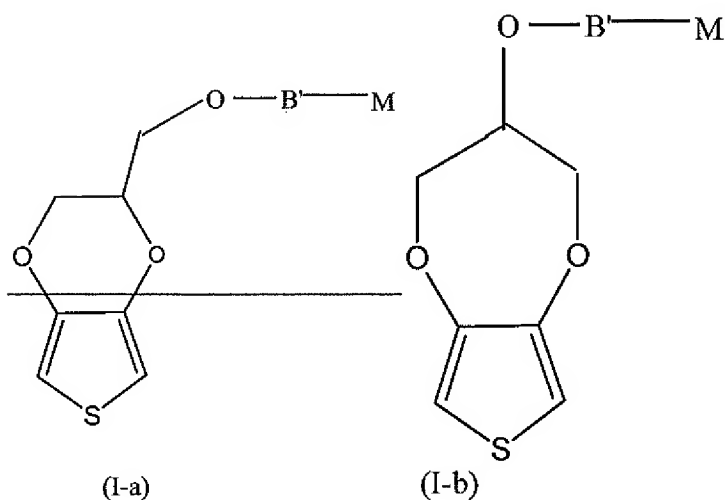
wherein

F' is H, substituted or unsubstituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>1</sub>-C<sub>22</sub>-haloalkyl, C<sub>1</sub>-C<sub>22</sub>-alkenyl, C<sub>1</sub>-C<sub>22</sub>-alkoxy, C<sub>1</sub>-C<sub>22</sub>-thioalkyl, C<sub>1</sub>-C<sub>22</sub>-iminoalkyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyloxy, a radical of an aliphatic C<sub>1</sub>-C<sub>22</sub>-alkanecarboxylic acid or

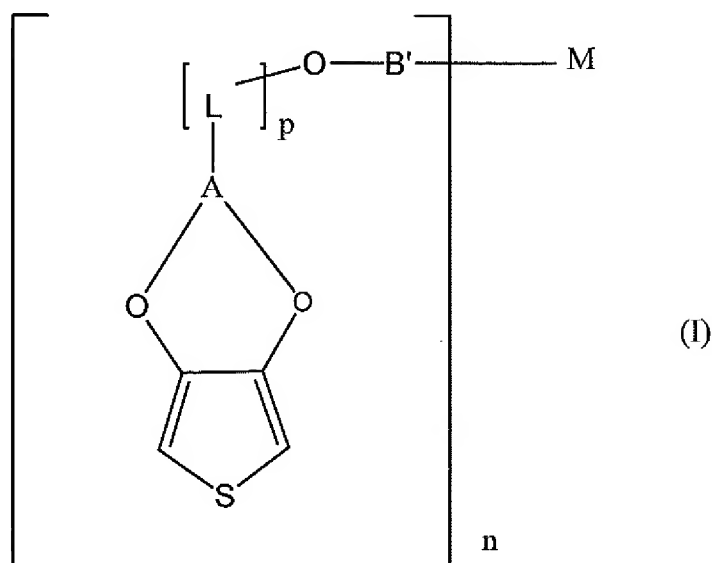


of acrylic acid, halogen, pseudohalogen, a nitro (NO<sub>2</sub>) group, a carboxyl group, a sulphonic acid group or sulphonate group or a hydroxy group.

48. (Currently Amended) The 3,4-Alkylendioxythiophene of claim 46, having the structure of the formulae (I-a) or formula (I-b),



49. (Previously presented) A 3,4-Alkylendioxythiophene of the formula (I),



wherein

A is a C<sub>1</sub>-C<sub>5</sub>-alkylene radical which is substituted at any point by a linker

L and optionally bears further substituents,

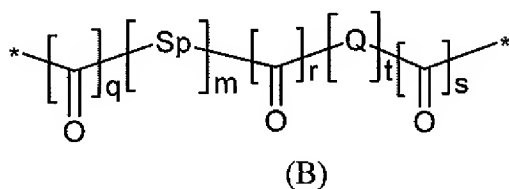
L is a methylene group,

p is 0 or an integer from 1 to 6,

M is an n-functional steroid radical or a derivative of a steroid radical,

n is 1 and

B' is a bridging group of the formula (B)



wherein

q is 0 or 1,

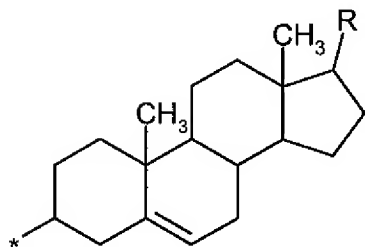
r and s are each independently 0 or 1, with the proviso that when r is 1, s is 0 and vice versa or both are optionally 0,

t is 0 or 1,

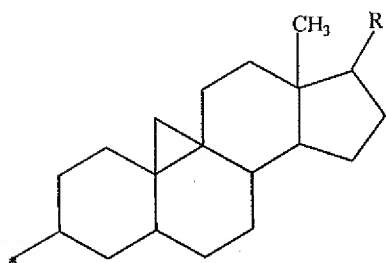
Sp is a spacer selected from the group consisting of substituted and unsubstituted linear or cyclic C<sub>1</sub>-C<sub>20</sub>-alkylene groups, C<sub>5</sub>-C<sub>20</sub>-arylene groups, C<sub>2</sub>-C<sub>20</sub>-heteroarylene groups in which from one to three heteroatoms selected from the group consisting of N, O and S can additionally be present in the heteroaromatic ring or ring system, C<sub>6</sub>-C<sub>20</sub>-aralkylene groups, C<sub>2</sub>-C<sub>200</sub>-oligoether and -polyether groups,

m is 0 or 1,  
Q is O, S or NH.

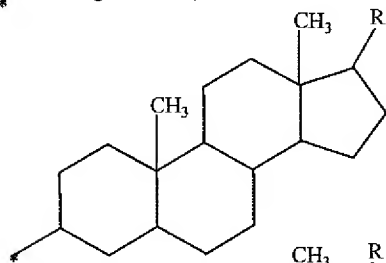
50. (Previously presented) The 3,4-Alkylenedioxythiophene as claimed in claim 49, wherein  
M is an n-functional cholesteryl radical or a derivative of the cholesteryl radical of the  
formula (III-a)-(III-e),



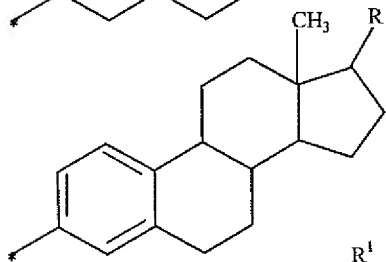
(III-a)



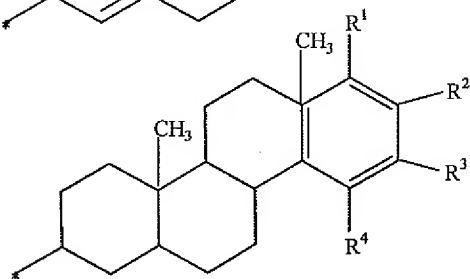
(III-b)



(III-c)



(III-d)

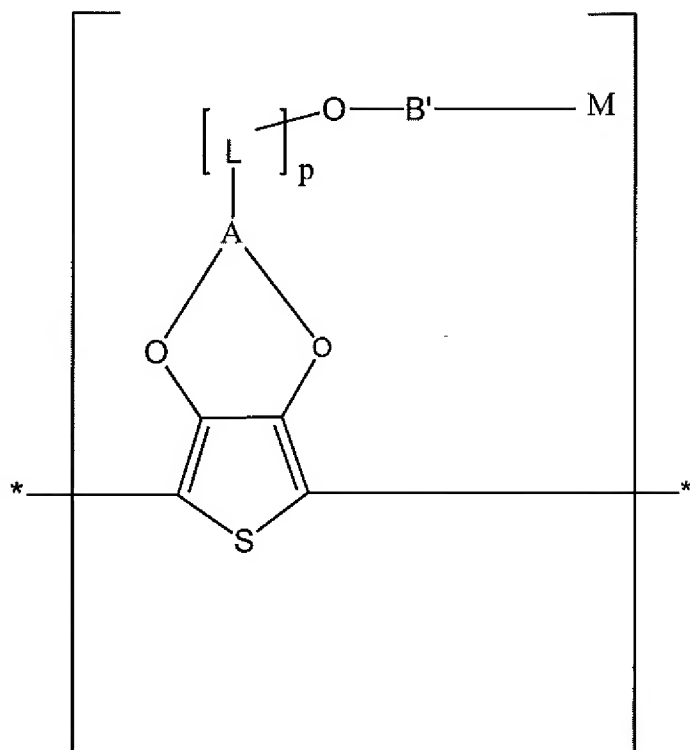


(III-e)

wherein R is H, substituted or unsubstituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>1</sub>-C<sub>22</sub>-haloalkyl, C<sub>1</sub>-C<sub>22</sub>-alkenyl, C<sub>1</sub>-C<sub>22</sub>-alkoxy, C<sub>1</sub>-C<sub>22</sub>-thioalkyl, C<sub>1</sub>-C<sub>22</sub>-iminoalkyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyloxy, a radical of an aliphatic C<sub>1</sub>-C<sub>22</sub>-alkanecarboxylic acid or of acrylic acid, halogen, pseudohalogen, a nitro (NO<sub>2</sub>) group, a carboxyl group, a sulphonic acid group or sulphonate group or a hydroxy group, and

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> can, independently of one another, be as defined above for R.

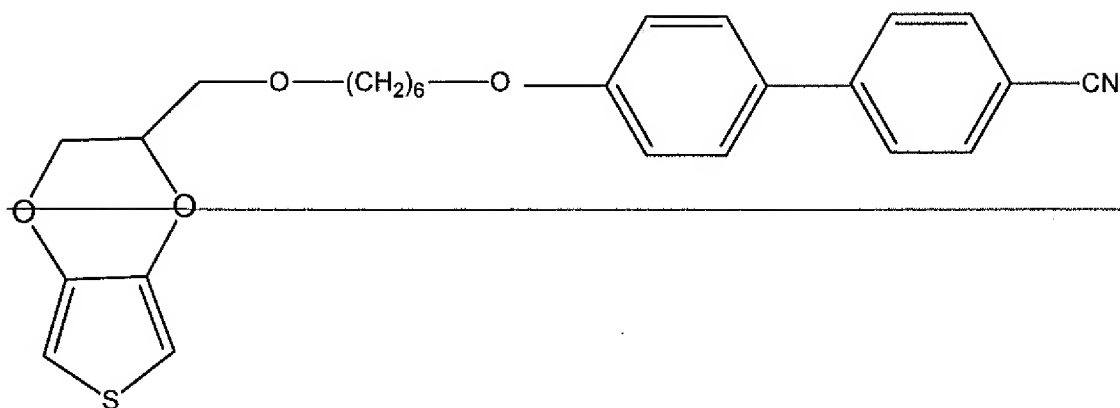
51. (Previously presented) A process for preparing a polythiophene comprising polymerizing the 3,4-alkylenedioxythiophene as claimed in claim 46.
52. (Currently Amended) The process of Claim 51 wherein ~~a mixture of~~ two or more compounds of Formula 1 are mixed together to form a mixture and the mixture is polymerized.
53. (Currently Amended) A process for preparing electrical or electronic components, light-emitting components, for antistatic coating, in optoelectronics or in solar energy technology comprising incorporating the polythiophene 3,4-alkylenedioxythiophene according to claim 46.
54. (Currently Amended) A polythiophene which comprise recurring units of the formula (IV),



(IV)

produced according to the process of claim 51

with the proviso that said polythiophenes is not



55. (Previously presented) A process for preparing electrical or electronic components, light-emitting components, for antistatic coating, in optoelectronics or in solar energy technology comprising incorporating the polythiophene of Claim 54.

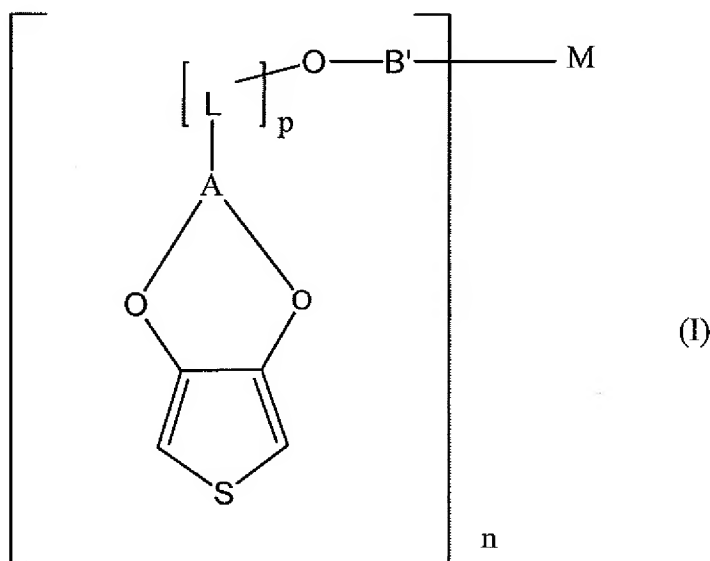
56. (Previously presented) A process for preparing conductive layers comprising incorporating the polythiophene according to Claim 54.

57. (Currently Amended) The process according to claim 52, wherein the polymerized mixture forms a layer which further comprises heating the layer at a temperature from 80°C to 300°C.

58. (Previously presented) The process according to claim 56, which further comprises heating the layer at a temperature from 80°C to 300°C.

59. (Cancelled)

60. (Currently Amended) A process for preparing the polythiophene as claimed in ~~claim 44~~ claim 54, comprising oxidatively polymerizing electrochemically compounds of the formula (I)

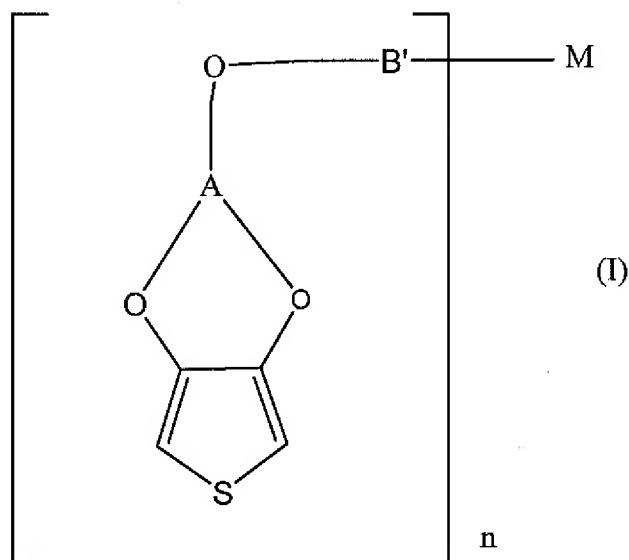
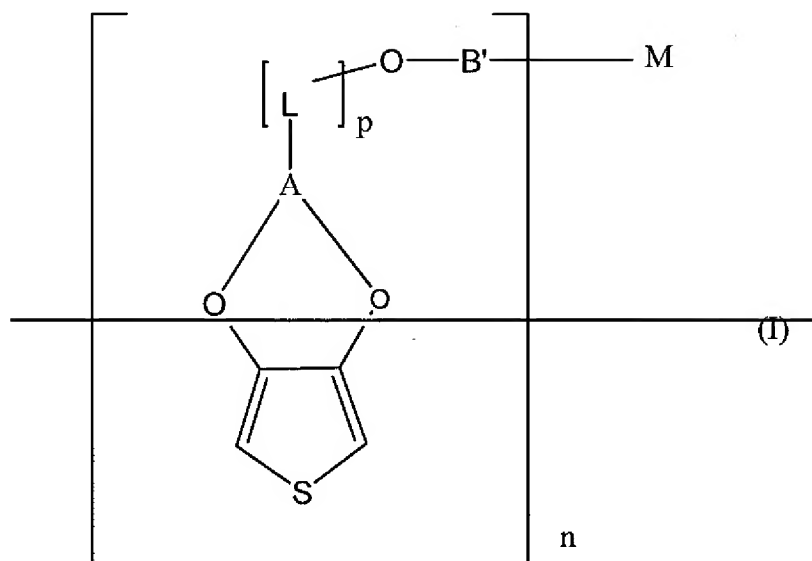


wherein

n an integer from 1 to 8, where when n is 1, the group of the formula (II-a) or (II-b) bears a terminal group F' at the linkage points denoted by \*.

61. (Cancelled)

62. (Currently Amended) The polythiophene of ~~claim 59~~ Claim 54, wherein they are cationically and electrically conductive and contain bound anions as counterions to balance the positive charge.
63. (Currently Amended) The polythiophene of ~~Claim 61~~ Claim 62, wherein the counterions are polyanions of polymeric carboxylic acids or polymeric sulphonic acids.
64. (Currently Amended) The polythiophene according to ~~claim 44~~ claim 54, wherein they are uncharged and semiconducting.
65. (Currently Amended) Process for ~~the preparing polythiophene~~ preparing the 3,4-alkylenedioxythiophene as claimed in claim 46 which comprises oxidatively polymerizing electrochemically compounds of the formula (I).
66. (Currently Amended) A 3,4-Alkylenedioxythiophenes of the formula (I),



wherein

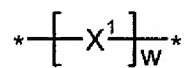
A is a C<sub>1</sub>-C<sub>5</sub>-alkylene radical which is substituted at any point by a linker L and optionally bears further substituents,

L is a methylene group,

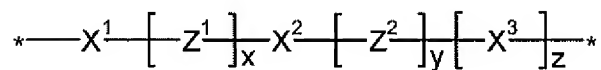
p is 0,

M is an n-functional group of the formula (II-a), (II-b) or (II-c-1) to (II-c-6),

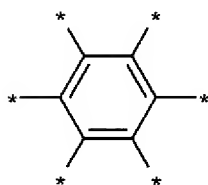




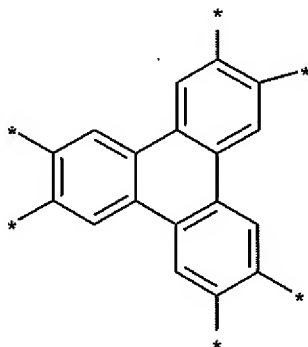
(II-a)



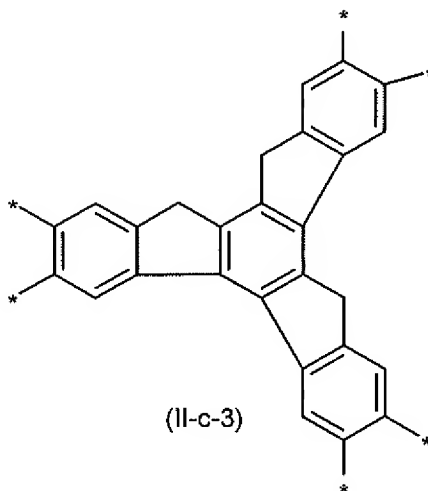
(II-b)



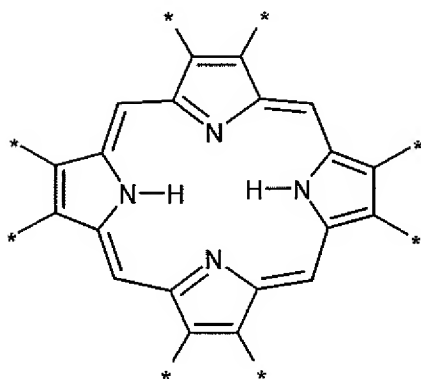
(II-c-1)



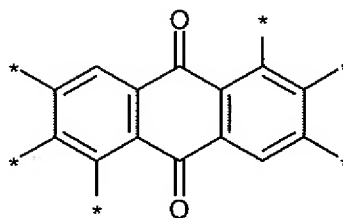
(II-c-2)



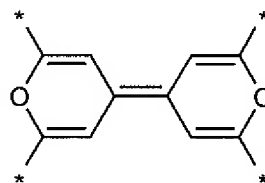
(II-c-3)



(II-c-4)



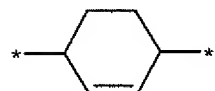
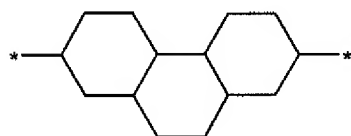
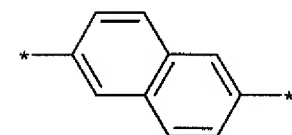
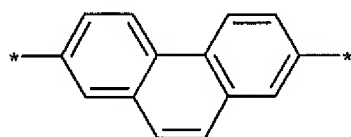
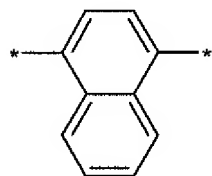
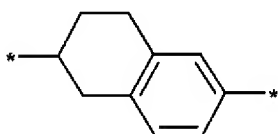
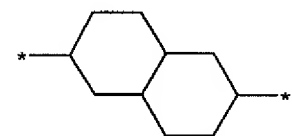
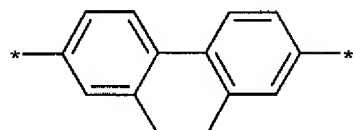
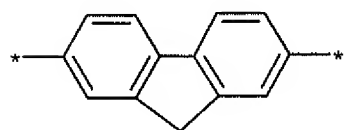
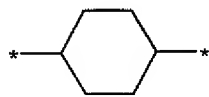
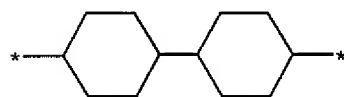
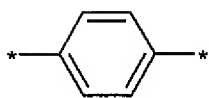
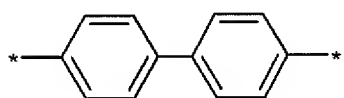
(II-c-5)

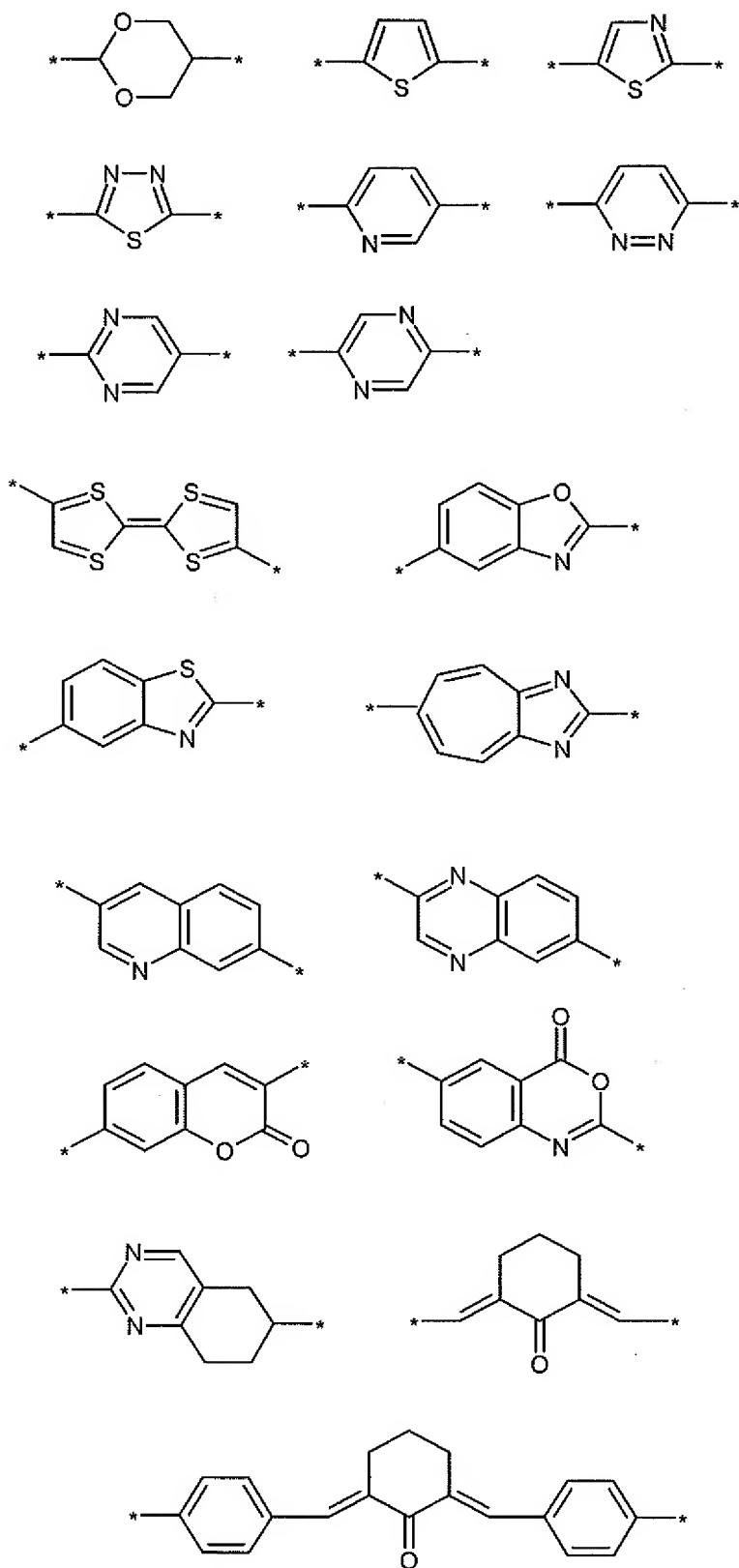


(II-c-6)

wherein

$X^1$ ,  $X^2$  and  $X^3$  are substituted or unsubstituted structures selected independently from the group consisting of





and

$Z^1$  and  $Z^2$  are structures selected independently from the group consisting of



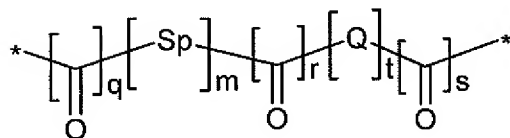
x, y and z are each, independently of one another, 0 or 1, and

n an integer from 1 to 8, where when n is 1, the group of the formula (II-a) or (II-b) bears a terminal group F' at the linkage points denoted by \*,

wherein

F' is substituted or unsubstituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>1</sub>-C<sub>22</sub>-haloalkyl, C<sub>1</sub>-C<sub>22</sub>-alkenyl, C<sub>1</sub>-C<sub>22</sub>-alkoxy, C<sub>1</sub>-C<sub>22</sub>-thioalkyl, C<sub>1</sub>-C<sub>22</sub>-iminoalkyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyloxy, a radical of an aliphatic C<sub>1</sub>-C<sub>22</sub>-alkanecarboxylic acid or of acrylic acid, halogen, pseudohalogen, a nitro (NO<sub>2</sub>) group, a carboxyl group, a sulphonic acid group or sulphonate group or a hydroxy group,

B' is a bridging group of the formula (B)



(B)

wherein

q is 0 or 1,

r and s are identical or different and each are 0 or 1, with the proviso that when r is 1, s is 0 and vice versa or both are optionally 0,

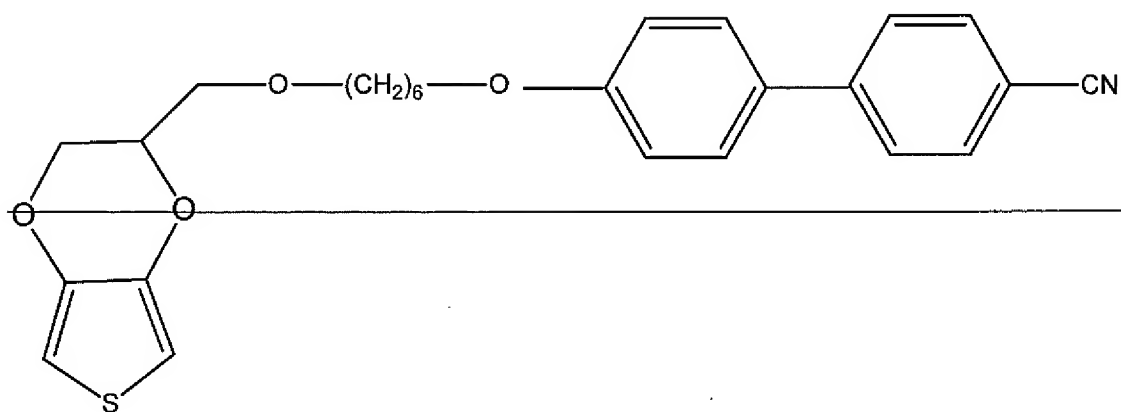
t is 0 or 1,

Sp is a spacer selected from the group consisting of substituted and unsubstituted linear or cyclic C<sub>1</sub>-C<sub>20</sub>-alkylene groups, C<sub>5</sub>-C<sub>20</sub>-arylene groups, C<sub>2</sub>-C<sub>20</sub>-heteroarylene groups in which from one to three heteroatoms selected from the group consisting of N, O and S can additionally be present in the heteroaromatic ring or ring system, C<sub>6</sub>-C<sub>20</sub>-aralkylene groups, C<sub>2</sub>-C<sub>200</sub>-oligoether and -polyether groups,

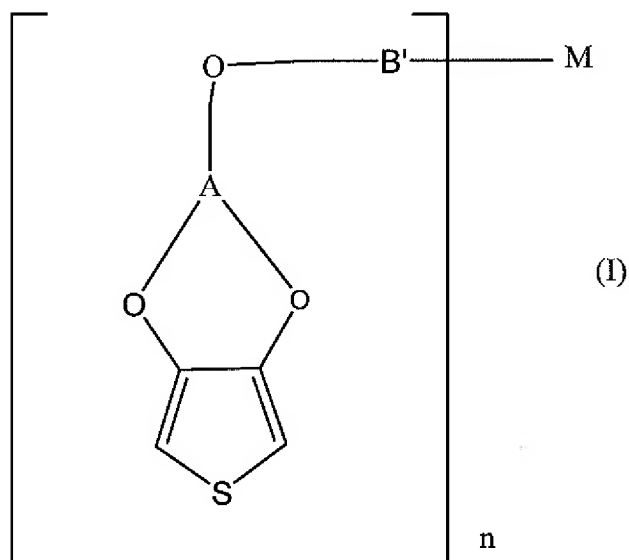
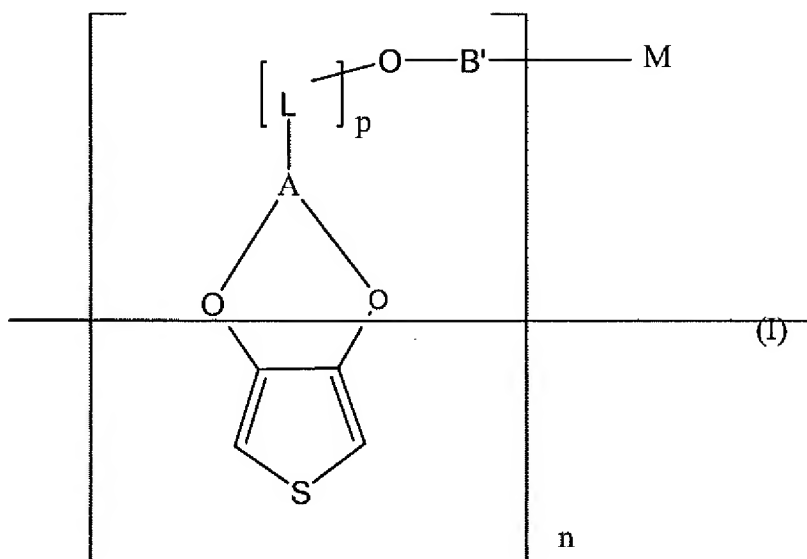
m is 0 or 1, and

Q is O, S or NH

~~with the proviso that said polythiophenes is not~~



67. (Currently Amended) A 3,4-Alkylenedioxythiophenes of the formula (I),



wherein

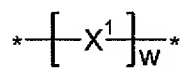
A is a C<sub>1</sub>-C<sub>3</sub>-alkylene radical which is substituted at any point by a linker

L and optionally bears further substituents,

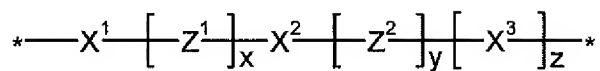
L is a methylene group,

p is 0 or an integer from 1 to 6,

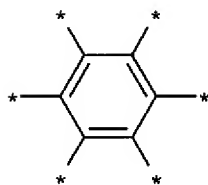
M is an n-functional group of the formula (II-a), (II-b) or (II-c-1) to (II-c-6),



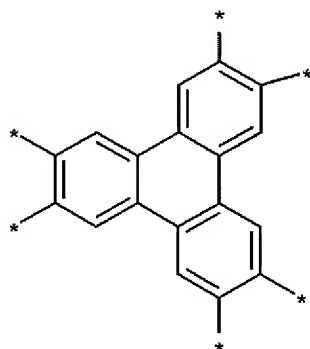
(II-a)



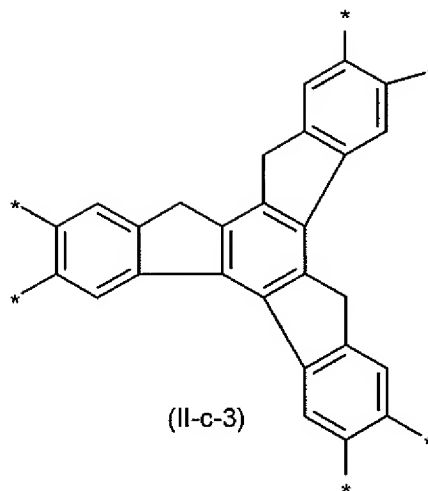
(II-b)



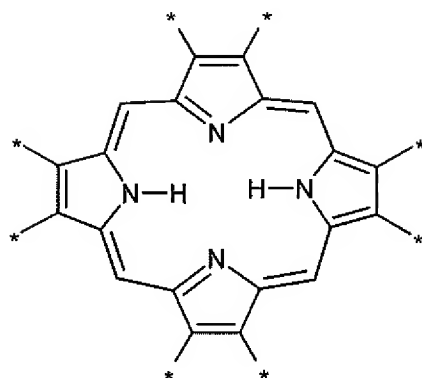
(II-c-1)



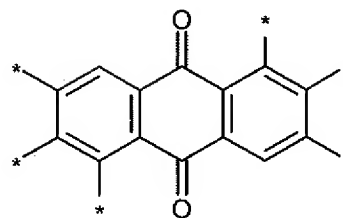
(II-c-2)



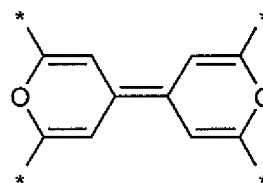
(II-c-3)



(II-c-4)



(II-c-5)

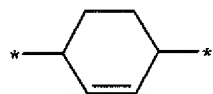
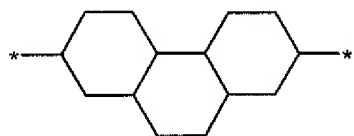
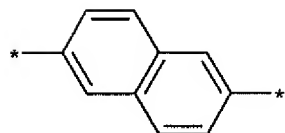
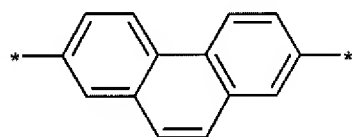
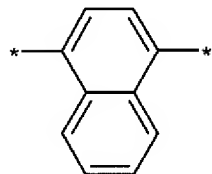
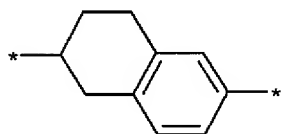
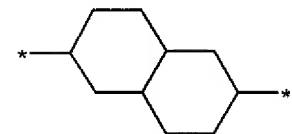
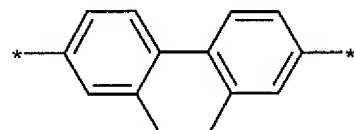
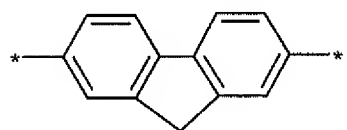
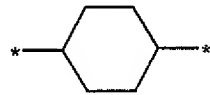
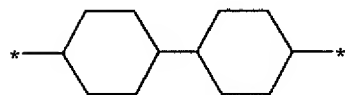
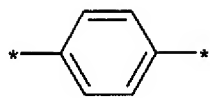
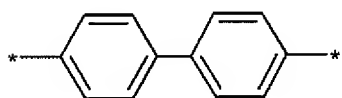


(II-c-6)

wherein

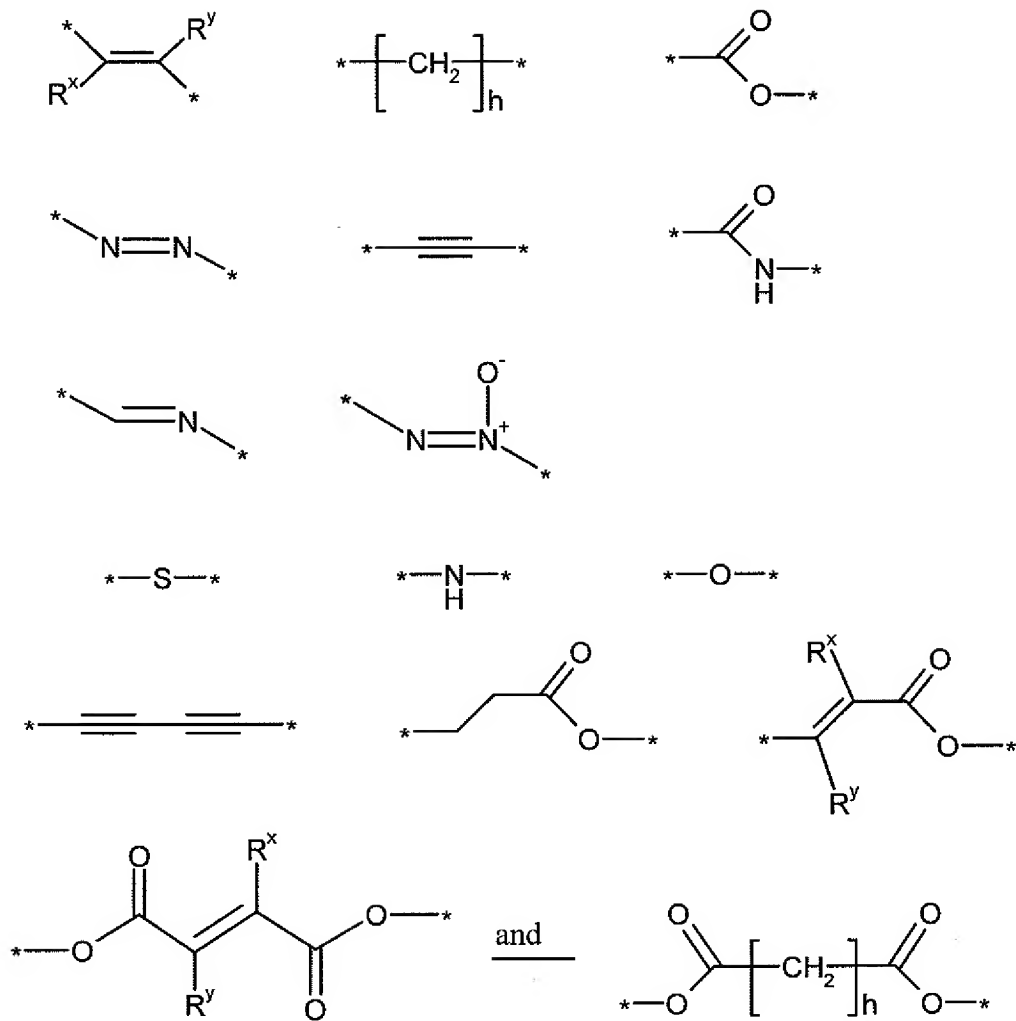
$X^1$ ,  $X^2$  and  $X^3$  are substituted or unsubstituted structures selected independently from the group consisting of







659165



wherein

$\text{R}^x$  and  $\text{R}^y$  are each, independently of one another, H, substituted or unsubstituted  $\text{C}_1$ - $\text{C}_{22}$ -alkyl,  $\text{C}_1$ - $\text{C}_{22}$ -haloalkyl,  $\text{C}_1$ - $\text{C}_{22}$ -alkenyl,  $\text{C}_1$ - $\text{C}_{22}$ -alkoxy,  $\text{C}_1$ - $\text{C}_{22}$ -thioalkyl,  $\text{C}_1$ - $\text{C}_{22}$ -iminoalkyl,  $\text{C}_1$ - $\text{C}_{22}$ -alkoxycarbonyl,  $\text{C}_1$ - $\text{C}_{22}$ -alkoxycarbonyloxy, a radical of an aliphatic  $\text{C}_1$ - $\text{C}_{22}$ -alkanecarboxylic acid or of acrylic acid, halogen, pseudohalogen,  $\text{NO}_2$ , a carboxyl group or a hydroxy group,

$h$  is an integer from 1 to 10,

$w$  is an integer from 1 to 5,

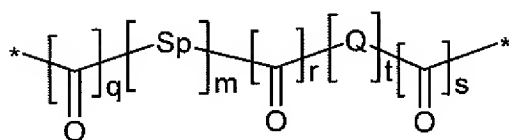
x, y and z are each, independently of one another, 0 or 1, and

n an integer from 1 to 8, where when n is 1, the group of the formula (II-a) or (II-b) bears a terminal group F' at the linkage points denoted by \*,

wherein

F' is substituted or unsubstituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>1</sub>-C<sub>22</sub>-haloalkyl, C<sub>1</sub>-C<sub>22</sub>-alkenyl, C<sub>1</sub>-C<sub>22</sub>-alkoxy, C<sub>1</sub>-C<sub>22</sub>-thioalkyl, C<sub>1</sub>-C<sub>22</sub>-iminoalkyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>22</sub>-alkoxycarbonyloxy, a radical of an aliphatic C<sub>1</sub>-C<sub>22</sub>-alkanecarboxylic acid or of acrylic acid, halogen, pseudohalogen, a nitro (NO<sub>2</sub>) group, a carboxyl group, a sulphonic acid group or sulphonate group or a hydroxy group,

B' is a bridging group of the formula (B)



(B)

wherein

q is 0 or 1,

r is 1,

s is 0,

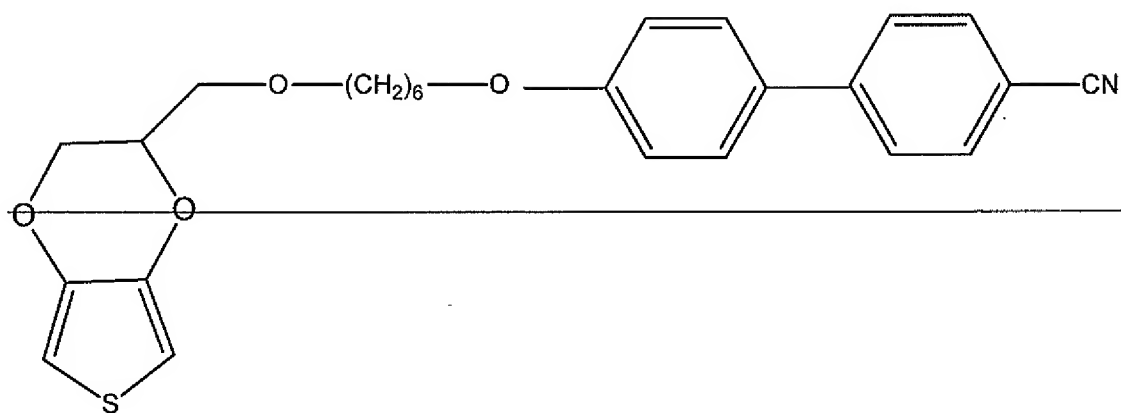
t is 0 or 1,

Sp is a spacer selected from the group consisting of substituted and unsubstituted linear or cyclic C<sub>1</sub>-C<sub>20</sub>-alkylene groups, C<sub>5</sub>-C<sub>20</sub>-arylene groups, C<sub>2</sub>-C<sub>20</sub>-heteroarylene groups in which from one to three heteroatoms selected from the group consisting of N, O and S can additionally be present in the heteroaromatic ring or ring system, C<sub>6</sub>-C<sub>20</sub>-aralkylene groups, C<sub>2</sub>-C<sub>200</sub>-oligoether and -polyether groups,

m is 0 or 1, and

Q is O, S or NH

~~with the proviso that said polythiophenes is not~~



68. (Cancelled)

69. (Cancelled)